

IN THE ABSTRACT

Kindly cancel the originally-filed abstract and substitute therefore the following abstract presented on a separate sheet.

ABSTRACT:

The present invention relates to an encoding apparatus and a corresponding method for two-dimensionally encoding user data of a user data stream into channel data of a channel data stream along a two-dimensional channel strip of at least two bit rows one-dimensionally evolving along a first direction and being aligned with each other along a second direction, said two directions constituting a two-dimensional lattice of bit positions. According to the invention the apparatus comprises a modulation code encoder for modulation code encoding said user data into said channel data according to a two-dimensional modulation code being adapted to prevent predetermined worst case patterns of channel data in said channel data stream. The worst-case patterns are typical for high-density two-dimensional optical storage channels.